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09/590,760	06/08/2000	Keith A. Lowery	066241.0104	9892

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EXAMINER

BAUGH, APRIL L

ART UNIT	PAPER NUMBER
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2141

DATE MAILED: 03/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/590,760

Applicant(s)

LOWERY ET AL.

Examiner

April L Baugh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) 9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Response to Amendment

Applicant amended claims 1, 12, 20, 24, and 27 and canceled claim 9, therefore claims 1-8 and 10-29 are now pending.

Response to Arguments

1. Applicant's arguments with respect to claims 1-8 and 10-29 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

2. Claims 10 and 11 objected to because of the following informalities: Claims 10 and 11 depend upon canceled claim 9~~9~~. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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1. Claims 1-5 and 10-27 rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,038,601 to Lambert et al. in view of Zhang et al.

Regarding claim 1, Lambert et al. teaches a method for processing data comprising: receiving data at a cache server; receiving an expiration command at the cache server from a remote client; and marking the data as expired according to the expiration command (column 7, lines 53-58).

Lambert et al. does not teach generating an expiration command at a data center manager and sending it to the cache server. Zhang et al. teaches generating an expiration command at a data center manager in response to a change in the data and receiving an expiration command at the cache server from the data center manager (column 5, lines 37-42 and column 9, lines 1-23 and column 10, lines 40-41). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the method and apparatus for storing and delivering documents on the internet of Lambert et al. by generating an expiration command at a data center manager and sending it to the cache server because this decreases the load on the origin server which originally issued and monitored expiration of cache content.

Regarding claim 24, Lambert et al. teaches a method for providing efficient data access service comprising: subscribing an origin server to a data center; routing a data request from a browser to the data center, the data request requesting a dynamic content item and having an associated address indicating the origin server; determining whether the dynamic content item is available at the data center; generating the dynamic content item at the origin server when the dynamic content item is unavailable at the data center; retrieving the dynamic content item from the origin server when the content item is unavailable at the data center; and communicating the

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dynamic content item to the browser (column 5, lines 56-60 and column 23, line 67 through column 24, line 1).

Lambert et al. does not teach receiving an expiration command from a data center manager; updating an expiration time of the dynamic content item in accordance with the expiration command; determining whether the dynamic content item is available at the data center according to the expiration time of the dynamic content item. Zhang et al. teaches receiving an expiration command from a data center manager; updating an expiration time of the dynamic content item in accordance with the expiration command; determining whether the dynamic content item is available at the data center according to the expiration time of the dynamic content item (column 5, lines 37-42 and column 6, lines 9-17 and 55-60 and column 7, lines 20-60 and column 9, lines 1-23 and column 10, lines 40-41 and 49-50). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the method and apparatus for storing and delivering documents on the internet of Lambert et al. by receiving an expiration command from a data center manager; updating an expiration time of the dynamic content item in accordance with the expiration command; determining whether the dynamic content item is available at the data center according to the expiration time of the dynamic content item because this decreases the load on the origin server which originally issued and monitored expiration of cache content and now the origin server is accessed only when updated content is not available on the cache server.

Regarding claim 27, Lambert et al. teaches a system for processing data comprising: a data center operable to receive a request from a client; and a data center manager coupled to a data source and the data center, the data source operable to generate a data change message, and

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the data center manager operable to receive the data change message and generate an expiration message therefrom (column 5, lines 56-60 and column 12, lines 52-55).

Lambert et al. does not teach the data center manager operable to send the expiration message to a cache server. Zhang et al. teaches the data center manager operable to send the expiration message to a cache server (column 5, lines 37-42 and column 9, lines 1-23 and column 10, lines 40-41). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the method and apparatus for storing and delivering documents on the internet of Lambert et al. by having the data center manager operable to send the expiration message to a cache server because this decreases the load on the origin server which originally issued and monitored expiration of cache content.

Regarding claim 2, Lambert et al. teaches the method for processing data according to Claim 1 further comprising: receiving a data request at the cache server from a remote computer, the data request requesting data from the cache server; determining whether the requested data is available at the cache server; retrieving the requested data from an origin server when the requested data is unavailable; and communicating the requested data from the cache server to the remote computer (column 5, lines 56-60).

Regarding claim 3, Lambert et al. teaches the method for processing data according to Claim 2 wherein the data comprises a web page and further comprising generating the web page at an origin server (column 1, lines 16-20).

Regarding claim 4, Lambert et al. teaches the method for processing data according to Claim 3, wherein generating the web page comprises generating the web page based on the data request (column 1, lines 16-20 and 27-31).

Regarding claim 5, Lambert et al. teaches the method for processing data according to Claim 2, wherein determining whether the requested data is available comprises: determining whether the requested data is present at the cache server; and determining whether the requested data is current when the requested data is present at the cache server (column 5, lines 56-60 and column 12, lines 49-55).

Regarding claim 10, Lambert et al. teaches the method for processing data according to Claim 1 further comprising generating the expiration command at the data center manager in response to the elapsing of a predetermined period of time (column 12, lines 50-52).

Regarding claim 11, Lambert et al. teaches the method for processing data according to Claim 1, wherein generating the expiration command comprises: detecting a change in the data associated with the origin server by a trigger associated with the data; generating a data change command indicating at least one changed item of content; and communicating the data change command to the data center manager (column 7, lines 55-58 and column 32, lines 12-18).

Regarding claim 12, Lambert et al. teaches the method for processing data according to Claim 1, wherein marking the data as expired comprises receiving the expiration command from the data center manager and determining the data to expire as a function of the expiration command (column 7, lines 52-58).

Regarding claim 13, Lambert et al. teaches the method for processing data according to Claim 12, wherein the expiration command expires a single web page (column 12, lines 50-52).

Regarding claim 14, Lambert et al. teaches the method for processing data according to Claim 12, wherein the expiration command expires a plurality of web pages (column 7, lines 52-58).

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Regarding claim 15, Lambert et al. teaches the method for processing data according to Claim 12, wherein the expiration command expires a plurality of web pages at a plurality of web sites (column 7, lines 52-58).

Regarding claim 16, Lambert et al. teaches the method for processing data according to Claim 12, wherein the expiration command expires a plurality of web pages at a plurality of domains (column 7, lines 52-58).

Regarding claim 17, Lambert et al. teaches the method for processing data according to Claim 12 further comprising: receiving at the data center manager a data change message from a trigger associated with a data source, the data source associated with an origin server; and generating the expiration command at the data center manager as a function of the data change message (column 7, lines 55-58 and column 32, lines 12-18).

Regarding claim 18, Lambert et al. teaches the method for processing data according to Claim 1, wherein the data comprises a web page using the hypertext markup language (column 1, lines 16-20).

Regarding claim 19, Lambert et al. teaches the method for processing data according to Claim 1, wherein the expiration command comprises an Internet Cache Synchronization Protocol command (column 8, lines 31-35 and 53-56).

Regarding claim 20, Lambert et al. teaches the method for processing data according to Claim 19, wherein the expiration command comprises an Internet Cache Synchronization Protocol terse command and further including generating the expiration command at the data center manager in response to an Internet Cache Synchronization Protocol verbose command (column 7, lines 53-58 column 8, lines 31-35 and 53-56).

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Regarding claim 21, Lambert et al. teaches the method for processing data according to Claim 1, wherein the data has an associated request element identifying the data, the request element having a first portion and a second portion distinct from the first portion and wherein receiving data at the cache server comprises: filtering the first portion of the request element based on predetermined criteria associated with an origin server associated with the data; and identifying the data based on the second portion of the request element (column 5, lines 51-60).

Regarding claim 22, Lambert et al. teaches the method for processing data according to Claim 21 further comprising: receiving a request at the cache server, a first portion of the request being distinct from the first portion of the request element and a second portion of the request being substantially similar to the second portion of the request element; and retrieving the data as a function of the second portion of the request and the second portion of the request element (column 5, lines 51-60).

Regarding claim 23, Lambert et al. teaches the method for processing data according to Claim 22, wherein the request element comprises a uniform resource locator and the request comprises a uniform resource locator (column 9, lines 59-60).

Regarding claim 25, Lambert et al. teaches the method for providing efficient data access service according to Claim 24, wherein subscribing the origin server comprises transferring domain name resolution service to the data center and wherein routing the data request comprises resolving the address associated with the origin server (column 4, lines 17-19 and 30-34 and column 23, line 67 through column 24, line 1).

Regarding claim 26, Lambert et al. teaches the method for providing efficient data access service according to Claim 24, wherein determining whether the dynamic content item is

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available comprises: determining whether the dynamic content item is present at the data center; and determining whether the dynamic content item is current when the content item is present at the data center (column 5, lines 56-60 and column 12, lines 49-55).

2. Claim 6-8, 28, and 29 rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,038,601 to Lambert et al in view of Zhang et al. as applied to claims 1-5, 10-27 above, and further in view of Douglas.

Regarding claim 6, Lambert et al. in view of Zhang et al. teaches the method for processing data according to Claim 2, wherein retrieving the requested data (column 5, lines 56-60).

Lambert et al. in view of Zhang et al. does not teach controlling, by the flow control server, retrieval by the cache server of the requested data from the origin server. Douglas teaches wherein retrieving the requested data comprises controlling, by the flow control server, retrieval by the cache server of the requested data from the origin server (column 2, lines 33-39).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the method and apparatus for storing and delivering documents on the internet by controlling of Lambert et al. in view of Zhang et al., by the flow control server, retrieval by the cache server of the requested data from the origin server because this prevents the origin server being overloaded with request.

Regarding claim 7, Lambert et al. in view of Zhang et al. teaches the method for processing data according to Claim 6 (column 5, lines 56-60).

Lambert et al. in view of Zhang et al. does not teach determining when the cache server retrieves the requested data based on the current load and the priority of the requested data.

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Douglas teaches wherein controlling retrieval comprises: determining at the flow control server a current load associated with the origin server; prioritizing at the flow control the requested data; and determining when the cache server retrieves the requested data based on the current load and the priority of the requested data (column 2, lines 33-39 and column 5, lines 24-26). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the method and apparatus for storing and delivering documents on the internet of Lambert et al. in view of Zhang et al. by determining when the cache server retrieves the requested data based on the current load and the priority of the requested data because this prevents the origin server being overloaded with request.

Regarding claim 8, Lambert et al. in view of Zhang et al. teaches the method for processing data according to Claim 7 (column 5, lines 56-60).

Lambert et al. in view of Zhang et al. does not teach granting permission to the cache server when the current load is below a predetermined threshold. Douglas teaches wherein determining whether to grant permission comprises: granting permission to the cache server when the current load is below a predetermined threshold; and denying permission to the cache server when the current load exceeds the predetermined threshold (column 2, lines 33-39 and column 5, lines 24-26 and column 8, lines 8-9 and 12-13 and 16-18 and 20). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the method and apparatus for storing and delivering documents on the internet of Lambert et al. in view of Zhang et al. by granting permission to the cache server when the current load is below a predetermined threshold because this prevents the origin server being overloaded with request.

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Regarding claim 28, Lambert et al. in view of Zhang et al. teaches the system for processing data according to Claim 27, wherein the data center comprises a web server and a cache (column 5, lines 9-11).

Lambert et al. in view of Zhang et al. does not teach the data center comprises a flow control server. Douglas teaches wherein the data center comprises a flow control server (column 2, lines 33-39). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the method and apparatus for storing and delivering documents on the internet of Lambert et al. in view of Zhang et al. by the data center comprises a flow control server because this prevents the origin server being overloaded with request.

Regarding claim 29, Lambert et al. in view of Zhang et al. teaches the system for processing data according to Claim 28, wherein the web server is operable to receive the request from the client, wherein the cache server is operable to store data received from the origin server (column 5, lines 55-60).

Lambert et al. in view of Zhang et al. does not teach wherein the flow control server is operable to prioritize the request and control the cache server. Douglas teaches wherein the flow control server is operable to prioritize the request and control the cache server (column 2, lines 33-39). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the method and apparatus for storing and delivering documents on the internet of Lambert et al. in view of Zhang et al. by wherein the flow control server is operable to prioritize the request and control the cache server because this prevents the origin server being overloaded with request.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents are cited to further show the state of the art with respect to content synchronization in general:

US Pat No. 6,233,606 to Dujari

US Pat No. 6,442,601 to Gampper et al.

US Pat No. 6,119,153 to Dujari et al.

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to April L Baugh whose telephone number is 703-305-5317. The examiner can normally be reached on Monday-Friday 8:30am-5:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal D Dharia can be reached on 703-305-4003. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ALB


RUPAL DHARIA
SUPERVISORY PATENT EXAMINER